REMARKS

Applicant would first like to thank the Examiner for providing the courtesy of an interview with Applicant on September 29, 2006. The Examiner has rejected Applicant's pending claims, claims 1-3, 5-13 and 15-17, as obvious under 35 U.S.C. §103(a). Applicant has amended claims 15-17 and added new claims 18 and 19.

The Examiner has rejected claims 1-3, 5-7, 10-13 and 15-17 as being obvious over U.S. Patent No. 6,107,378 (the '378 patent) in view of U.S. Patent No. 6,512,174 (the '174 patent) and U.S. Patent No. 5,872,169 (the '169 patent). The Examiner alleges that the '378 patent teaches a method for forming housings for electronic appliances by compounding a biodegradable resin and a hydrolysis inhibitor or carbodiimide to maintain mechanical strength. The Examiner alleges that the difference between the '378 patent and the claimed invention is the claimed invention's use of a flame retardant, and that the '174 patent cures this deficiency by teaching the use of a flame retardant with "similar resins". The Examiner thus alleges that it would have been obvious to combine the flame retardant of the '174 patent with the biodegradable polymer/hydrolysis inhibitor composition of the '378 patent to arrive at the instantly claimed invention.

The mere fact that the art allegedly teaches 1) a composition of flame retardant and biodegradable polymer and 2) a composition of hydrolysis inhibitor and polymer does not make it obvious for one to make a composition having both a flame retardant and hydrolysis inhibitor within a biodegradable polymer. At most, such a combination would be "obvious to try". There must be some suggestion, teaching, or motivation for one of skill in the art to combine the references for the resulting combination to be obvious. "'Obvious to try' has long been held not to constitute obviousness." *In re Deuel*, 51 F.3d 1552, 1559

(Fed. Cir. 1995). In the instant case, the Examiner has merely provided references that allegedly demonstrate that a biodegradable polymer can be combined with a hydrolysis inhibitor and that a biodegradable polymer can be combined with a flame retardant. The Examiner has not pointed to any portion of these two references that would teach, suggest, or motivate one of skill in the art to take both the flame retardant and the hydrolysis inhibitor and add them to a biodegradable polymer. Nor has the Examiner pointed to a teaching, suggestion, or motivation to select one of the specific flame retardants to which the claims in the present application are specifically directed, namely, a hydroxide compound, a phosphorus compound, and a silica compound. The mere fact that individually the flame retardant and the hydrolysis inhibitor had been added to a biodegradable polymer does not make the combination of all three components obvious.

The Examiner next asserts that claims 15-17 only cite percentages with respect to hydroxide, phosphorus and silica compounds, respectively. The Examiner therefore asserts that claims 16 and 17 are "anticipated by compositions containing hydroxide flame retardants." Applicant first notes that no references were cited that were alleged to be anticipatory. However, in light of Applicant's amendment to claims 15-17, the Examiner's arguments with respect to these claims are deemed to be moot. Applicant respectfully asserts that the references as applied do not teach either 1) the composition of claim 1 wherein the flame retardant additive is the hydroxide compound which is present in an amount of 10 to 40% by weight, 2) the composition of claim 1 wherein the flame retardant additive is the phosphorus compound which is present in an amount of 3 to 15% by weight or 3) the composition of claim 1 wherein the flame retardant additive is the silica compound which is present in an amount of 15 to 30% by weight.

The Examiner also asserts that simple experimentation would be required to determine the "optimal amount" of each type of flame retardant, as claimed in claims 15-17, necessary to achieve the desired results. As noted above, however, there is no teaching, suggestion or motivation to add a flame retardant compound, selected from a hydroxide compound, a phosphorus compound, and a silica compound, to a combination of biodegradable polymer and hydrolysis inhibitor. Therefore, the amount of flame retardant added to that combination would clearly not be obvious. However, assuming for the sake of argument, that such a combination were obvious, the amount of flame retardant necessary to provide a composition having sufficient flame retardant properties while still maintaining sufficient strength would require extensive experimentation, far beyond the "simple experimentation" asserted by the Examiner.

The Examiner also notes that, based on the '174 patent's identification of a number of possible additives to polyactic acid polymers and failure to identify particular amounts of such additives, determining the proportion of flame retardants is a matter of ordinary skill in the art. Applicant is aware of no case law which holds that the identification of possible components in the prior art without identification of specific amounts constitutes a *prima fascie* case of obviousness for those amounts.

The process of formulating new polymer compositions including additives is a complex and uncertain art and the inclusion of multiple additives adds an additional dimension of complexity. Too much flame retardant will result in the polymer lacking sufficient strength or rigidity of form; and too little flame retardant will result in the polymer lacking the necessary flame retardency; not to mention the possible effects varying the amount of the flame retardant could have on the biodegradability of the polymer. Similar concerns affect the

amount of hydrolysis inhibitor used. Furthermore, the combination of all three ingredients requires a balancing of all three of these compounds in order to meet the optimal characteristics of strength, flame retardency and biodegradability. Such balancing is not "simple experimentation". Rather, such experimentation is complex and extensive and rises to the level of invention.

The Examiner also points to claim 18 of U.S. Patent No. 5,358,422 ("the '422 patent") which he asserts demonstrates that the identification of flame retardant as an additive to a polymer composition is fully enabled by mere identification of the flame retardant as a possible additive while leaving the specific amounts up to the technician. Whether or not the Patent Office allowed claim 18 of the '422 patent is irrelevant to the examination at hand, however claim 18 of the '422 identifies a polymer and flame retardant. It fails to identify the biodegradable nature of the polymer or the hydrolysis inhibitor. These are two additional factors which add to the complexity of determining the proper amounts of flame retardants to use and renders these claims beyond the level of "simple experimentation".

The Examiner has recited claims 8, 9, and 15-17 as being obvious over the '378 patent in view of the '174 patent and U.S. Patent Application No. 2001/0018487 ("the '487 application"). Specifically, the Examiner alleges that the '378 patent teaches a biodegradable polymer and a hydrolysis inhibitor and that the '174 patent teaches a polymer and a flame retardant. The Examiner next alleges that the '487 application teaches the use of 5-40 micron silica in making flame retardant resin compositions and that it would have been obvious to use such a compound as a flame retardant in a composition featuring the biodegradable polymer and hydrolysis inhibitor of the '378 patent and flame retardant of the '174 patent. As noted

previously, however, there is no teaching, suggestion or motivation to combine the '174 and '378 patents. Moreover, the selection of 5-40 micron silica for use in such a hypothetical combination would again be nonobvious for similar reasons to those stated above with respect to the amounts of flame retardants used, namely, that inclusion of the 5-40 micron silica would have an unknown effect on the strength and biodegradability of the polymer.

With respect to the rejection of claims 15-17, Applicant reiterates the arguments made above, namely that the amendment to the claims places them in condition for allowance and that the amounts of flame retardant used is not obvious in view of the cited art.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he/she telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

By _____

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